SONY
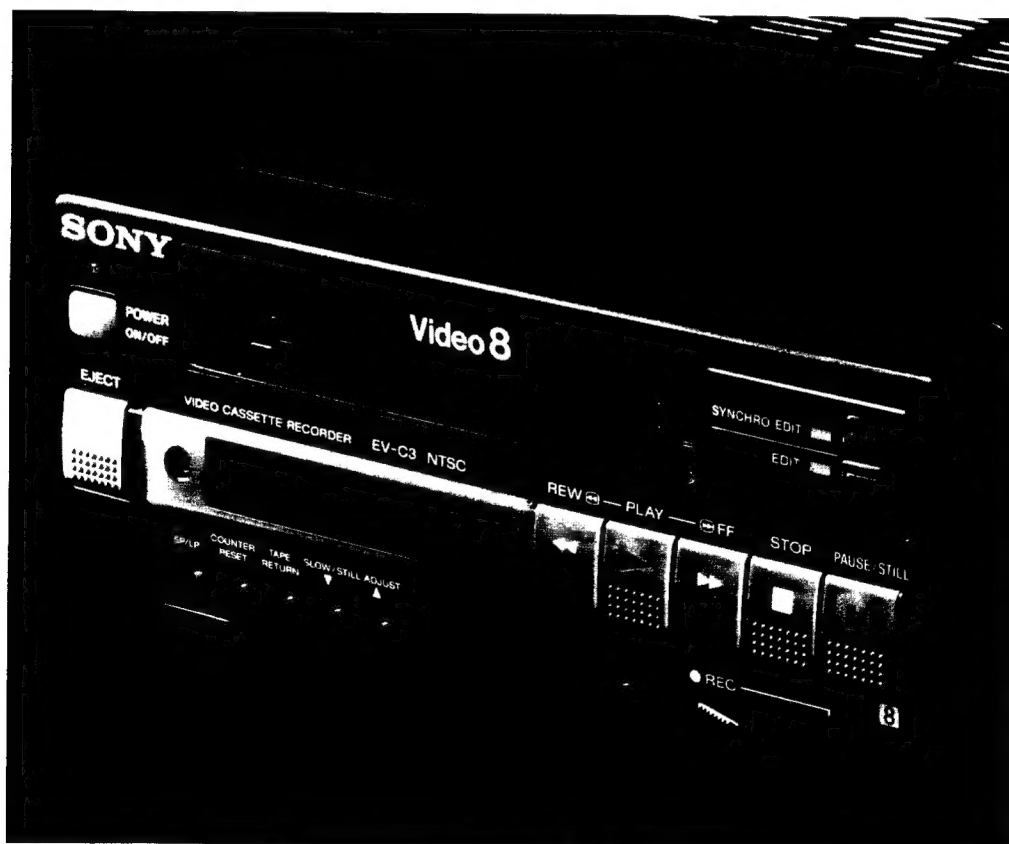
Video Cassette Recorder 8

EV-C3

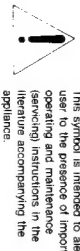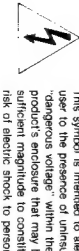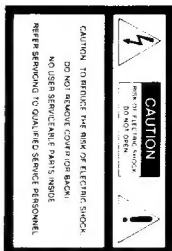## Operating Instructions

Before operating the unit, please read this manual thoroughly and retain it for future reference.

Video 8

WARNING

To prevent fire or shock hazard, do not expose the unit to rain or moisture.

This symbol is intended to alert the user to the presence of uninsulated "dangerous voltage" within the product's enclosure that may be of sufficient magnitude to constitute a risk of electric shock to persons.

This symbol is intended to alert the user to the presence of important operating and maintenance (servicing) instructions in the literature accompanying the appliance.

Owner's Record

The model number is located at the front and rear and the serial number on the front panel. Record the serial number in the space provided below. Refer to these numbers whenever you call upon your Sony dealer regarding this product.

Model No. EVC3   Serial No. _____

Caution

Television programs, films, video tapes and other materials may be copyrighted. Unauthorized recording of such material may be contrary to the provisions of the copyright laws. Also, use of this recorder with cable television transmission may require authorization from the cable television transmitter and/or program owner.

This unit uses 8mm video format cassettes. It can play back in the SP mode (approximately 1.43 cm/second) and the LP mode (approximately 0.72 cm/second)

For the customers in the U.S.A.

This equipment generates and uses radio frequency energy and if not installed and used properly, that is, in strict accordance with the manufacturer's instructions, may cause interference to radio and television reception. It has been type tested and found to comply with the limits for a Class B computing device in accordance with the specifications in Subpart J of Part 15 of FCC Rules, which are designed to provide reasonable protection against such interference in a residential installation. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

Reorient the receiving antenna

Relocate the equipment with respect to the receiver

Move the equipment away from the receiver

Plug the equipment into a different outlet so that equipment and receiver are on different branch circuits.

If necessary, the user should consult the dealer or an experienced radio/television technician for additional suggestions. The user may find the following booklet prepared by the Federal Communications Commission helpful:

"How to Identify and Resolve Radio-TV Interference Problems". This booklet is available from the U.S. Government Printing Office, Washington, DC 20402, Stock No. 004-000-00345-4.

For the customers in Canada

This apparatus complies with the Class B limits for radio noise emissions set out in Radio interference Regulations.

Note to CATV system installer:

This reminder is provided to call the CATV system installer's attention to Article 820-22 of the NEC that provides guidelines for proper grounding and, in particular, specifies that the cable ground shall be connected to the grounding system of the building, as close to the point of cable entry as practical.

Precautions

On safety

- This unit operates only on 120 V AC, 60 Hz.
- Should any solid object or liquid fall into the cabinet, unplug the unit and have it checked by qualified personnel before operating it any further.
- One blade of the plug is wider than the other for the purpose of safety and it will fit into the power outlet only one way. If you are unable to insert the plug into the outlet, contact your dealer.
- Unplug the unit from the wall outlet if it is not going to be used for an extended period of time. To disconnect the cord, pull it out by the plug. Never pull the cord itself.

On installation

- Allow adequate air circulation to prevent internal heat build-up. Do not place the unit on surfaces (rugs, blankets, etc.), or near materials (curtains, draperies) that may block the ventilation slots.
- Do not install the unit near heat sources such as radiators or air ducts, or in a place subject to direct sunlight, excessive dust, mechanical vibration or shock.
- The unit is designed for operation in a horizontal position. Do not install it in an inclined position.
- Keep the unit and cassette tapes away from equipment with strong magnets, as for example microwave ovens or large loudspeakers.
- Do not place any heavy object on the unit.
- Do not install the unit near an AM receiver, since noise may be heard when listening to AM programs.

On operation

- When the unit is not in use, turn the power off to conserve energy and to extend its life.
- Remove and store video cassettes after recording or playback.
- Store the cassettes in their cases and keep them in an upright position to prevent intrusion of dust and uneven winding.

On cleaning

Clean the cabinet, panel and controls with a dry, soft cloth or a soft cloth lightly moistened with a mild detergent solution. Do not use any type of solvent, such as alcohol or benzine, which might damage the finish.

On repacking

Do not throw away the carton and packing materials. They make and ideal container in which to transport the unit.

If you have any questions about this unit, contact your Sony service facility.

Table of Contents

Introduction

Overview of the EV-C3

The EV-C3 8 mm recorder enables easy editing of the tape recorded by your 8 mm camera recorder and other VCRs. Employing a CONTROL L connector and a CONTROL S IN jack, it is possible to perform synchronized editing, eliminating the need to operate two VCRs at a time during tape editing. Also, it is possible to remotely control the EV-C3 by a video editing controller such as the RM-E100V. You will be able to record in both SP (standard play) mode and the LP (long play) mode.

However, note that PCM recording/playback available on some 8 mm recorders is not possible with this unit. The PCM sound recorded or after-recorded with another recorder cannot be played back with this unit. Its compactness and the ease of operation expands the enjoyment of creating your own video program.

How the Manual is Organized

This manual is arranged to help you find the information you need for the operation of the EV-C3. Take a moment to check the content of this manual in the Table of Contents. Read the "Antenna Connection" and "Setting the RF Unit" section first to make the correct connections to the TV unit before you begin.

How the Manual Works

- Controls and setting on the EV-C3 are shown in capital letters.

Press the POWER button.

- The number in an illustration corresponds to the number in the text.

1
2
3
4
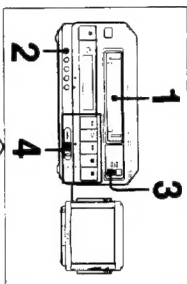
3 Press the EDIT button and light the indicator.

- Notes are enclosed in a box like this:

Notes on the handling of batteries
- In normal operation the batteries will last for approximately 6 months.
- If the Commander will not be used for a long period of time, remove the batteries to avoid possible damage from battery leakage.

Before You Begin...

Please go through this section before starting the operation of this unit.

Supplied Accessories

Please check that the following accessories are supplied with your unit.

- Remote Commander RMT-450 (1)

- Size AA (R6) Battery (2)

- External antenna connector (300-ohm to 75-ohm matching transformer) (1)
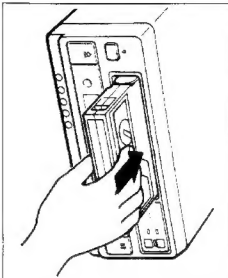
- 75-ohms coaxial cable with F-type connectors (1)

## Handling Video Cassettes

EJECT button

Cassette insertion

Insert a cassette fully into the unit with the window facing upwards. If the AC power cord is connected to the wall outlet, the power will be automatically turned on.

The cassette indicator and SP/LP mode indicator lights in the display window.

Cassette ejection

Press the ▲ EJECT button to unload the cassette. If the AC power cord is connected to the wall outlet, the cassette can be ejected even when the power of the unit is turned off.
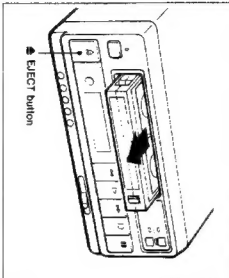
Recording/playback time

For recording, select the desired recording time by the SP/LP mode selection switch. For playback, the player automatically detects the recording format, SP or LP, of the cassette and then plays it back in the appropriate mode.
Refer to the chart on the left for the recording/playback time available in each mode.

Cassette used	SP mode	LP mode
P6-15MP	15 minutes	30 minutes
P6-30MP	30 minutes	1 hour
P6-60MP	1 hour	2 hours
P6-90MP	1 hour 30 minutes	3 hours
P6-120MP	2 hours	4 hours

Tape speed / Recording/Playback time

To avoid erasing pre-recorded video contents

When a new recording is made on a previously recorded cassette, the previous recording will be automatically erased. To avoid unintentional erasure of pre-recorded video sources, slide the tab out to cover the opening. When the tab is showing, recording cannot be made. To re-record on a cassette, slide the tab in.

Red color
Recording not available when the red portion appears.
Recording available
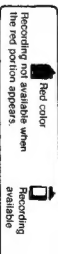
Notes on handling the cassette

- Do not insert anything other than a cassette into the cassette compartment.
- Avoid using and storing the cassette in the location subject to dust, direct sunlight or near heat sources, susceptible to vibration, and subject to strong magnetic field.
- Store cassette in their cases and keep them in an upright position to prevent intrusion of dust and uneven winding.
- When the cassette will not be used for a long period of time, periodically rewind and advance the tape at a high speed, once or twice a year.
- Do not insert anything in the small holes on the rear of the cassette.

Front

● **POWER ON/OFF switch and indicator**
Press to turn on the power of the unit. The indicator lights when the power is supplied.

● **Remote sensor**
Point the supplied infrared Remote Commander RMT-450 here.

● **Cassette compartment**
Insert a 8 mm format video cassette tape.

● **SYNCHRO EDIT button and indicator**
Press to activate the SYNCHRO EDIT mode when controlling another VCR via the CONTROL L connector during editing.

● **EDIT button and indicator**
Press to light the indicator and activate the EDIT mode when editing tapes. High quality picture can be obtained during editing by activating this mode. Normally keep the indicator turned off.

● ▲ **EJECT button**
Press to unload the cassette.

● **SP/LP select button**
Press to switch the recording mode.

● **COUNTER RESET button**
Press to reset the tape counter to "0:00:00s."

● **TAPE RETURN button**
Press to advance or rewind the tape to the counter "0:00:00s" point.

● **SLOW/STILL ADJUST ▼/▲ button**
Press the ▼ or ▲ button to adjust the picture when streaks appear or when picture shifts vertically during slow motion playback or still mode.

● **REC switch and indicator**
Slide to the right to start recording.

● **Tape transport buttons and indicators**
◄◄ REW (rewind)
► PLAY (forward)
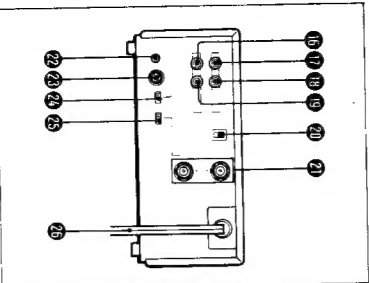►► FF (fast forward)
■ STOP
II PAUSE/STILL

Display window
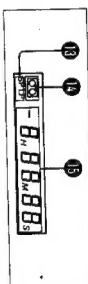
● **SP (standard play)/LP (long play) recording/playback mode indicator**

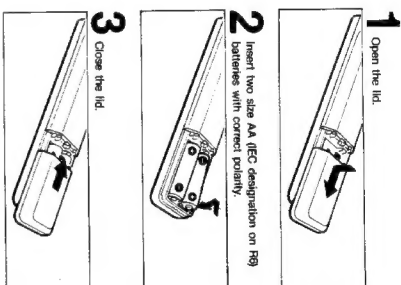● **Cassette indicator**

● **Tape counter**

Rear

● **LINE OUT AUDIO jack (phono type)**

● **LINE IN AUDIO jack (phono type)**

● **LINE IN VIDEO jack (phono type)**

● **LINE OUT VIDEO jack (phono type)**

● **RF UNIT switch**
Set to 3CH or 4CH which is not assigned for a TV channel in your area referring to the "Setting the RF Unit" section.

● **VHF/UHF IN/OUT connector (F type)**
Make connections referring to the "Antenna Connection" section.

● **CONTROL S IN jack (mini type)**
Connect to the CONTROL S OUT jack of other Sony video products for remote control operation.

● **CONTROL L connector (5 pin DIN)**
Connect to the CONTROL L connector of other Sony video products for remote control operation.

● **SLAVE/MASTER switch**
Set to SLAVE when remotely controlling the unit by other Sony products via the CONTROL L connector. Set to MASTER when remotely controlling other Sony products via the CONTROL L connector by this unit.

● **TV/VTR switch**
When connecting the unit and the TV via the VHF antenna terminal, normally set this switch to VTR. When you wish to view TV programs when the unit is in use, set this switch to TV.

● **AC power cord**

Remote Commander

● **TAPE RETURN button**
Functions the same as the TAPE RETURN on the unit.

● **COUNTER RESET button**
Functions the same as the COUNTER RESET on the unit.

● **REC**
Press the two buttons simultaneously to start recording.

● **‖ PAUSE**
Functions the same as the PAUSE/STILL button on the unit.

● **‖▶ FRAME**
Press during playback pause mode to view a frame-by-frame picture.

● **SEARCH** ◁◁/▷▷
Press to obtain a locked picture search in which high-speed picture in forward or reverse can be viewed even when releasing the button.

● **Tape transport buttons (PLAY, REW, FF, STOP)**
Functions the same as the buttons on the unit.

● **POWER ON/OFF switch**
Press to turn the unit on and off.

● **x 1/10**
Press during playback, playback pause, or x 2 playback mode to view playback at 1/10 times the normal speed (slow motion playback).

● **x 2**
Press during playback or playback pause mode to view playback at two times the normal playback speed.

● **x 1/5**
Press during playback, playback pause, or x 2 playback mode to view playback at 1/5 times the normal speed (slow motion playback).

How to insert batteries

1 Open the lid.

2 Insert two size AA (IEC designation on R6) batteries with correct polarity.

3 Close the lid.

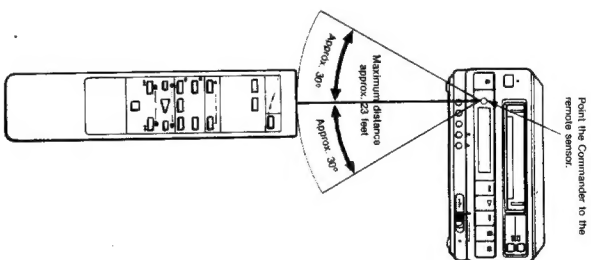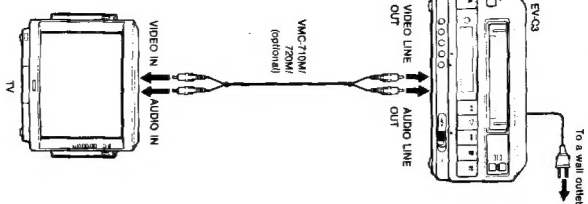**Notes on the handling of batteries**
- In normal operation, the batteries will last for approximately 6 months.
- If the Commander will not be used for a long period of time, remove the batteries to avoid possible damage from battery leakage.


The operating range of the Remote Commander

Point the Commander to the remote sensor.

Maximum distance approx. 23 feet
Approx. 30°
Approx. 30°

Playing Back a Tape

Connection (1) — To a TV with Video and Audio Inputs

VIDEO LINE OUT

VMC-710M/720M/ (optional)

VIDEO IN

AUDIO IN

AUDIO LINE OUT

TV

To a wall outlet

Note
When the TV has both L/R audio inputs, use the optional VMC-910MS/920MS cable for connection.

Operation
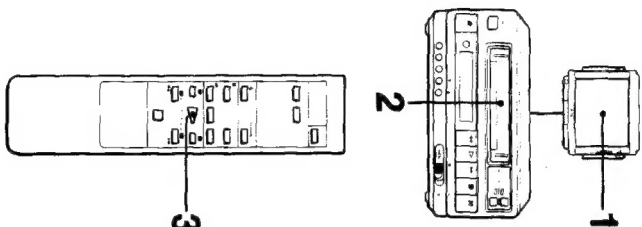
1 Turn on the TV and set its input selector to "VTR".

2 Insert the cassette fully into the cassette compartment.
The power will automatically be turned on and the cassette indicator lights in the display window.

3 Press the ▶ PLAY button.
The ▶ lamp lights, and the playback picture will appear on the TV screen.

To stop playback, press the ■ STOP button.
To rewind the tape, press the ◀◀ REW button.
To advance the tape in high speed, press the ▶▶ FF button.
To remove the cassette, press the ▲ EJECT button.

Auto rewind function
When the tape reaches its end after normal playback, it will automatically be rewound to the beginning and stops. However, the tape will not be rewound in the picture search or fast forward mode.
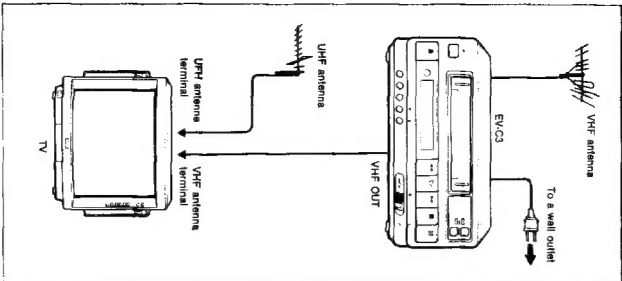
Auto play function
The unit can be set to go into playback automatically when the tape is completely rewound to the beginning of the tape. Press the ▶ PLAY button while holding down the ◀◀ REW button. This function is operable only on the unit.

Note
When playing back a blank tape
A gray screen will appear on the TV screen.
The tape counter will not function.

Connection (2) — To a TV without Video and Audio Inputs

VHF antenna

UHF antenna

EV-C3

VHF OUT

To a wall outlet

TV

UHF antenna terminal

VHF antenna terminal

Note

Various antenna connections can be considered depending upon the type of antenna and TV you have. See the "Antenna Connection" section first and make the correct connections.

Operation

(Rear panel)
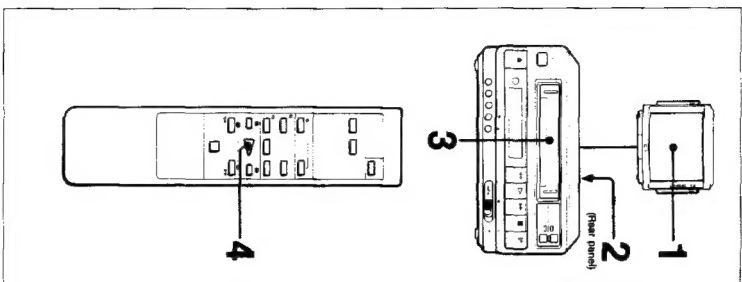
1 Turn on the TV.

2 Set the RF UNIT switch to either channel 3 or 4, whichever is not active in your area.
Refer to the "Setting the RF Unit" section.

3 Insert the cassette fully into the cassette compartment.
The power will automatically be turned on and the cassette indicator lights in the display window.

4 Press the ▶ PLAY button.
The ▶ lamp lights, and the playback picture will appear on the TV screen.

Note

How to use the TV/VTR switch
When connecting the unit to a TV without video and audio inputs, set the VTR/TV switch as follows:

VTR – Normally set to this position. When the power to the unit is turned on, picture from the EV-C3 or the singal fed from the EV-C3's VIDEO LINE IN jack can be viewed on the screen. When the unit is turned off, TV programs can be viewed on the screen.

TV – Set to this position when you wish to view TV programs while playing back the EV-C3 or recording video sources from the VIDEO LINE IN jack on the EV-C3.

Various Playback Modes

To obtain a still picture

During playback, press the ‖ PAUSE button.
The ‖ lamp lights and a still picture can be seen. To resume normal playback, press the ► PLAY button or the ‖ PAUSE button again. When the pause mode lasts for more than approximately 7 minutes, the unit will enter the playback mode.

To search for a desired scene — Picture search

During playback or still mode, press the ◄◄ REW button or the ►► FF button.
While the button is pressed, a high speed picture without sound will appear on the TV screen. When the button is released, the unit will return to the previous mode.

To view the picture during fast-forward or rewind mode — Locked picture search

During playback or still mode, press the SEARCH ⊡ or the ►► on the Remote Commander.
A high speed picture in forward or reverse will appear on the screen even when the button is released. To resume normal playback, press ► PLAY.

To view a playback picture at 2 times the normal speed in the forward direction.

During playback or still mode, press the x 2 button on the Remote Commander.
The sound can be heard in this mode. To resume normal playback, press ► PLAY.

To view a slow motion playback

During playback or still mode, press the 1/10 or the 1/5 button on the Remote Commander.
The sound is muted in these modes. To resume normal playback, press ► PLAY.

To advance the picture frame-by-frame

While in still mode, tap the ‖► FRAME button.
The picture advances frame-by-frame and the sound is muted.
To resume normal playback, press ► PLAY.

During fast-forward mode, press ►►.
During rewind mode, press ◄◄.
A playback picture can be viewed while the button is pressed. Release the button to return to the previous mode.

To view the picture momentarily while the unit is in the fast forward or rewind mode without picture on the screen.

When playing back tapes recorded in SP mode
A wider streak will appear on the screen during picture search mode compared to tapes recorded in LP mode. When viewing the picture in still or picture search mode, the picture may shake vertically or the color in the white and black portion may be reversed, depending upon the TV you are using.

Notes
When the picture shakes vertically during playback or still mode
Adjust the picture by the SLOW/STILL ADJ ▼/▲ buttons on the front panel.

When streaks appear during slow motion playback or still mode
Adjust the picture by the SLOW/STILL ADJ ▼/▲ buttons on the front panel. During still mode, enter the slow motion mode and make adjustments. Readjust the picture if streaks should appear when a tape recorded in a different mode is played back.

Picture and sound during picture search modes
A few streaks will appear on the screen but these are not a failure of the unit. Sound will be muted in the search modes.

Use of the Tape Counter

To recall the scene selected during playback or recording
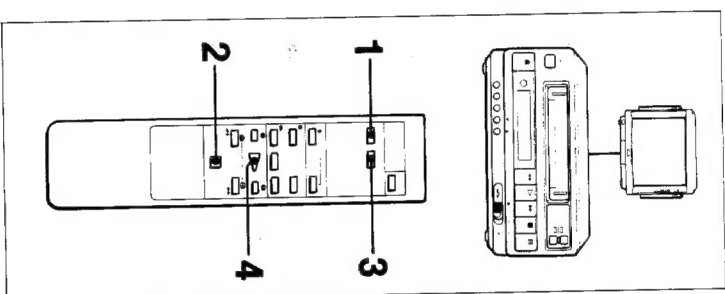
1 **During playback or recording, press the COUNTER RESET button at your desired scene.**
The tape counter will display "0:00:00" (counter 0 point).

2 **Press the STOP button after playback or recording is completed.**

3 **Press the TAPE RETURN button.**
At this point, the tape counter must display more than 1 minute. Otherwise this function will not operate. The unit will start searching for the counter 0 point.

4 **Press the ► PLAY button during the search mode.**
Playback starts from the scene selected in STEP 1.
If the ► PLAY button is not pressed, the unit will stop at the counter 0 point.

Note
Accuracy of the tape counter
As the linear time counter equipped on the unit is not a clock counter, a certain amount of difference may occur between the time counter display and the actual recording/playback time. This difference may be noticeable in case when you have switched the recording mode.
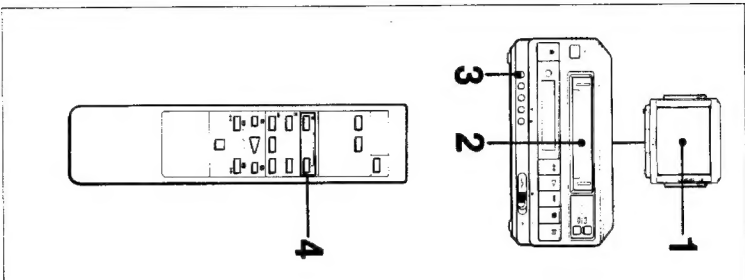
Recording TV Programs

Connection

To a wall outlet

EV-C3

VIDEO LINE IN   AUDIO LINE IN

VMC-710M/720M
(optional)
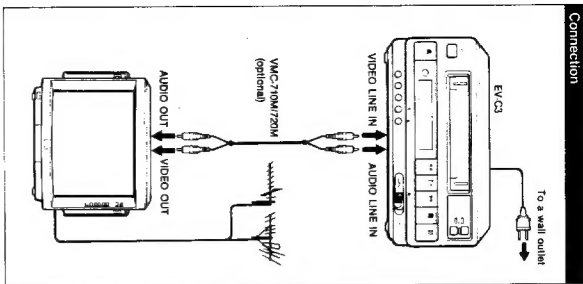
AUDIO OUT   VIDEO OUT

Notes

- As the EV-C3 has no built in tuner, connect a TV with tuner as shown above to record TV programs. Connect the TV antenna directly to the TV to the LINE IN VIDEO and AUDIO of the EV-C3. If your TV does not have video/audio outputs, TV programs cannot be recorded unless you use a color TV tuner. Refer to the instruction of the tuner for connections.
- When the TV has both L/R outputs, connect to its left channel only.

Operation

1 Turn on the TV and select the program to be recorded.

2 Insert a cassette fully into the compartment.
The power will automatically be turned on and the cassette indicator lights in the display window.

3 Select the recording mode by the SP/LP button.

4 Press the two buttons simultaneously to start recording.
The lamp on the REC button on the unit lights and recording starts.

To stop recording, press the ■ STOP button.

To stop the tape for a moment, press the ❙❙ PAUSE button.
To resume recording, press the ❙❙ PAUSE button.
When recording pause mode lasts for more than approximately 7 minutes, the unit enters the stop mode.

Auto rewind function

When the tape reaches its end during recording, it will automatically be rewound to the beginning and stops.

Editing

You can create your own video program by editing with another VCR. Take a look at the list below to find the type of editing you can perform with your video system.

To Make a Copy of the Tape

Playing back with another VCR and recording with the EV-C3 ......Page 21
Playing back with the EV-C3 and recording with another VCR ......Page 22

To Gather Desired Scenes from the Original Tape — Assemble Editing

If your VCR is equipped with a control terminal
Playing back with another VCR and recording with the EV-C3 ......Page 23
Playing back with the EV-C3 and recording with another VCR ......Page 26

If your VCR is not equipped with a control terminal
Playing back with another VCR and recording with the EV-C3 ......Page 27
Playing back with the EV-C3 and recording with another VCR ......Page 28

To Re-record New Scenes onto the Original Tape — Insert Editing

Playing back with another VCR and recording with the EV-C3 ......Page 29

Editing with a Video Remote Controller

Controlling the EV-C3 with the Sony RM-E100V video editing controller ......Page 32

Notes for Editing

Use of the EDIT button
Even when using the EDIT mode during editing, the quality of the edited tape will have a certain extent of degradation in picture and sound. Please avoid using the edited tape for multiple generations of editing.

When assemble editing is activated by the SYNCHRO EDIT button
The unit will automatically stop when the counter reaches "0h00m05s."

Caution
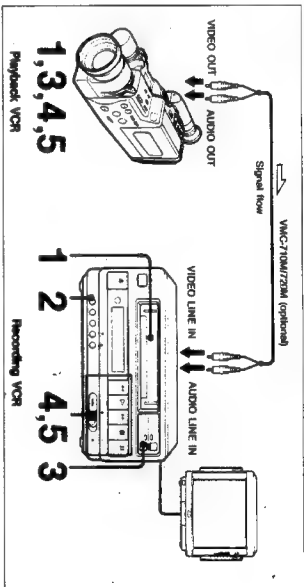Television programs, films, video tapes and other materials may be copyrighted.
Unauthorized duplication of such material may be contrary to the provisions of the copyright laws.

To Make a Copy of the Tape

■ **Example 1: Playing back with another VCR and recording with the EV-C3**

1 Turn on the power of the unit and insert a source tape.

2 Select the recording mode by the SP/LP button.

3 Activate the EDIT mode if the unit has this function.

4 Search for the playback start point and enter the playback pause mode.

Search for the recording start point and enter the recording pause mode.

5 Press the PAUSE button both of the units almost simultaneously.

Press the PAUSE button on the playback VCR a little before the recording VCR.

When copying is completed
Press the STOP button on both of the units.

Editing

To Make a Copy of the Tape

■ Example 2 — Playing back with the EV-C3 and recording with another VCR

VIDEO LINE OUT
AUDIO LINE OUT
Signal flow
VMC-910M/920M (optional)
VIDEO IN
AUDIO IN

Playback VCR
1,3,4 2

Recording VCR
1,2,3,4

Note: When the recording VCR is a monaural type, use the optional VMC-710M/720M.

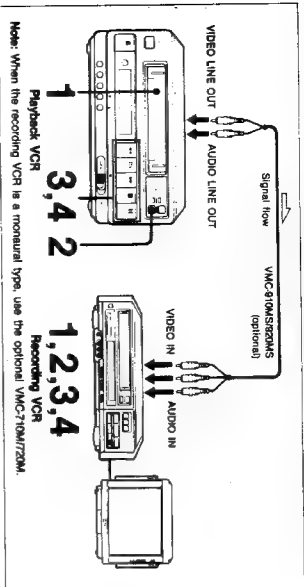|	Playback VCR	Recording VCR
1	Insert a source tape.	Turn on the power of the unit and insert a cassette for recording.
2	Press the EDIT button ▇ light the indicator.	Activate the EDIT mode if the unit has this function.
3	Search for the playback start point and enter the playback pause mode.	Search for the recording start point and enter the recording pause mode.
4	Press the PAUSE button on both of the units simultaneously.	Press the PAUSE button on the playback VCR a little before the recording VCR

When copying is completed
Press the STOP button on both of the units.

To Gather Desired Scenes from the Original Tape — Assemble Editing

■ Example 1 — Using the Control L connector
Playing back with another VCR and recording with the EV-C3
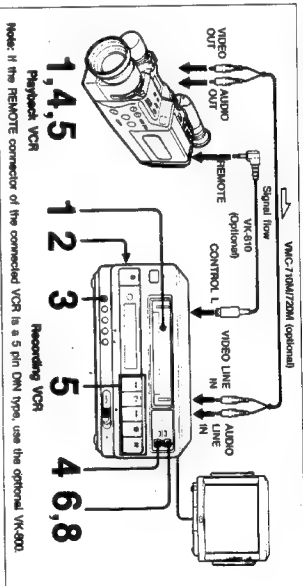
VIDEO OUT
AUDIO OUT
REMOTE
Signal flow
VK-810 (optional)
CONTROL L
VMC-710M/720M (optional)
VIDEO LINE IN
AUDIO LINE IN

Playback VCR
1,4,5

Recording VCR
1 2 3 5 4 6,8

Note: If the REMOTE connector of the connected VCR is a 5 pin DIN type, use the optional VK-800.

	Playback VCR	Recording VCR
1	Turn on the power of the unit and insert a source tape.	Insert a cassette.
2		Set the SLAVE/MASTER switch to MASTER.
3		Select the recording mode by the SP/LP button.
4	Press the EDIT button if the unit has this function.	
5	Search for the playback start point and enter the playback pause mode.	Search for the start point of the edit and enter the recording pause mode.

Editing

6

Playback VCR

Playback starts.

Recording VCR

Press the SYNCHRO EDIT button.

The indicator of the SYNCHRO EDIT and EDIT button lights.

Recording starts.

The unit enters the recording pause mode.

7

The unit enters the playback pause mode

Press the SYNCHRO EDIT button at the end point of the edit.
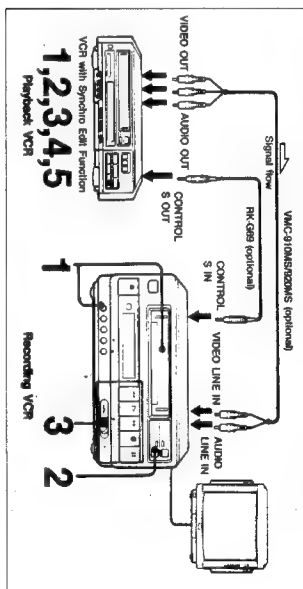
The unit enters the recording pause mode.

To edit the next scene
Repeat steps 5 to 7.

To stop during assemble editing
Press the SYNCHRO EDIT or ■ STOP button.

When editing is completed
Press the STOP button on both of the units.

To Gather Desired Scenes from a Prerecorded Tape - Assemble Editing

Example 2 — Using the Control S IN jack
Playing back with another VCR and recording with the EVC3

Signal flow

VMC-810/820/MS (optional)

RK-G69 (optional)

VIDEO OUT   AUDIO OUT   CONTROL S OUT

VCR with Synchro Edit Function

1,2,3,4,5
Playback VCR

CONTROL S IN   VIDEO LINE IN   AUDIO LINE IN

1   3   2

Recording VCR

1

Turn on the power of the unit and insert a source tape.

Insert a cassette.

Select the recording mode by the SP/LP button.

2

Press the EDIT button if the unit has this function.

Press the EDIT button.

3

Search for the playback start point and enter the playback pause mode.

Search for the edit start point and enter the recording pause mode.

4

Playback VCR

Press the SYNCHRO EDIT button.

Playback starts.

Recording VCR

Recording starts.

The unit enters the recording pause mode.

5

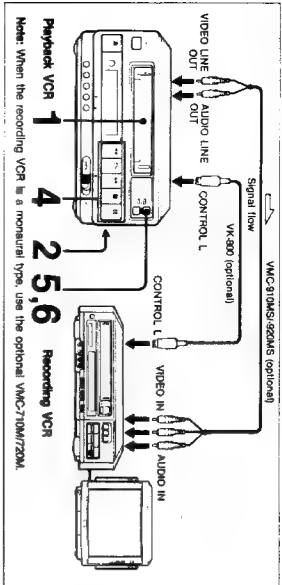Press the SYNCHRO EDIT button at the end point of the edit.

The unit enters the playback pause mode.
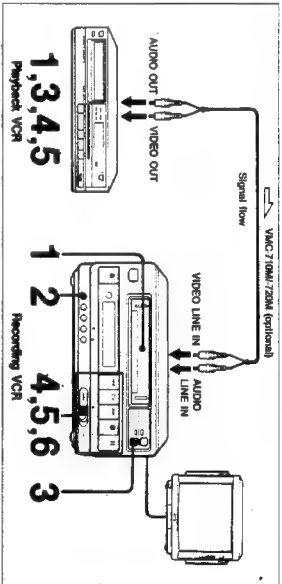
To edit the next scene
Repeat steps 3 to 5.

To stop during assemble editing
Press the SYNCHRO EDIT or ■ STOP button.

When editing is completed
Press the STOP button on both of the units.

Editing

To Gather Desired Scenes from a Pre-recorded Tape — Assemble Editing

■ Example 3 — Using the Control L connector
Playing back with the EV-C3 and recording with another VCR

VIDEO LINE OUT

AUDIO LINE OUT

Signal flow

VMC-910MS/920MS (optional)

CONTROL L

VK-800 (optional)

CONTROL L   VIDEO IN   AUDIO IN

Recording VCR

Note: When the recording VCR is a monaural type, use the optional VMC-710M/720M.

Playback VCR

1 Insert a source tape.

2 Set the SLAVE/MASTER switch to MASTER.

3 Search for the playback start point and enter the playback pause mode.

4 Press the SYNCHRO EDIT button.

The indicator of the SYNCHRO EDIT button lights.

Playback starts.

5 Press the SYNCHRO EDIT button again at the end point of the edit.

The unit enters the playback pause mode.

6 To edit the next scene
Repeat steps 4 to 6.

Recording VCR

1 Turn on the power of the unit and insert a cassette.

2 Set the SLAVE/MASTER switch to SLAVE.

3 Activate the EDIT mode if the unit has this function.

4 Search for the edit start point and enter the recording pause mode.

5 Press the SYNCHRO EDIT and EDIT button.

Recording starts.

6 The unit enters the recording pause mode.

To stop during assemble editing
Press the SYNCHRO EDIT or ■ STOP button.
When editing is completed
Press the STOP button on both of the units.

To Gather Desired Scenes from the Original Tape — Assemble Editing

■ Example 4 — Using a VCR not equipped with a control terminal
Playing back with another VCR and recording with the EV-C3

AUDIO OUT   VIDEO OUT

Signal flow

VMC-710M/720M (optional)

VIDEO LINE IN   AUDIO LINE IN

Recording VCR

Playback VCR

1 Turn on the power of the unit and insert a source tape.

2 Activate the EDIT mode if the unit has this function.

3 Search for the playback start point and enter the playback pause mode.

5 Release the playback and recording pause mode of both VCRs.

Press the PAUSE button on the playback VCR a little before the recording VCR.

6 To edit the next scene
Repeat steps 4 to 6.

Recording VCR

1 Insert a cassette.

2 Select the recording mode by the SP/LP button.

3 Press the EDIT button and light the indicator.

4 Search for the edit start point and enter the recording pause mode.
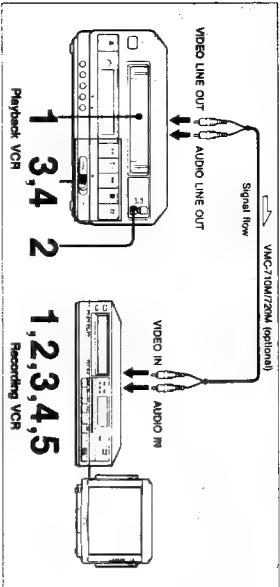
5 Press the PAUSE/STILL button at the end point of the edit.

6 When editing is completed
Press the STOP button on both of the units.

Editing

To Gather Desired Scenes from the Original Tape — Assemble Editing

■ Example 5 — Using a VCR not equipped with a control terminal
Playing back with the EV-C3 and recording with another VCR

VIDEO LINE OUT

AUDIO LINE OUT

Signal flow

VMC-710M/720M (optional)

VIDEO IN

AUDIO IN

Playback VCR

1 3,4 2

Recording VCR

1,2,3,4,5

Playback VCR

1 Insert a cassette.

2 Press the EDIT button and light the indicator.

3 Search for the playback start point and enter the playback pause mode.

4 Release the playback and recording pause mode of both VCRs.
Press the PAUSE/STILL button on the playback VCR a little before the recording VCR.
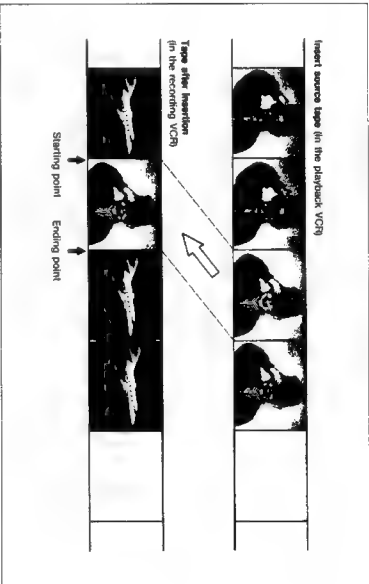
5 Press the PAUSE button at the end point of the edit.

Recording VCR

1 Turn on the power of the unit and insert a source tape.

2 Activate the EDIT mode if the unit has this function.

3 Search for the edit start point and enter the recording pause mode.

Playback VCR

Playback starts.

To edit the next scene
Repeat steps 3 to 5.

When editing is completed
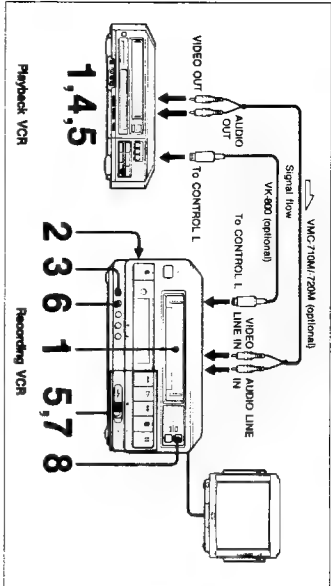Press the STOP button on both of the units.

To Re-record New Scenes onto the Original Tape — Insert Editing

■ Insert editing is a technique to re-record (insert) a different scene onto the original tape.

Insert source tape (in the playback VCR)

Tape after insertion (in the recording VCR)

Starting point   Ending point

Refer to the following pages for operation.

Editing

Example — Playing back with another VCR and recording with the EV-C3

Signal flow

VMC-710M/720M (optional)

VK-800 (optional)

VIDEO OUT

AUDIO OUT

To CONTROL L

To CONTROL L

VIDEO LINE IN

AUDIO LINE IN

Playback VCR

Recording VCR

1 Turn on the power of the unit and insert a source tape.

Playback VCR

Recording VCR

2 | Set the SLAVE/MASTER switch to MASTER.

3 | Select the recording mode by the SP/LP button. Select the mode in which the previous recording was made.

4 Activate the EDIT mode if the unit has this function.

5 Search for the playback start point and enter the playback pause mode. | Search for the edit start point.

6 Press the COUNTER RESET button to display "0h00m00s" in the display window.

7 Rewind the tape and enter the recording pause mode at the start point of the edit.

8 Press the SYNCHRO EDIT button. The indicator of the SYNCHRO EDIT and EDIT button lights.

9 The unit automatically enters the playback pause mode when the editing is completed.

The unit automatically enters the recording pause mode when the TAPE COUNTER displays "0h00m00s".

To stop editing before the point set in step 6, press the SYNCHRO EDIT button.

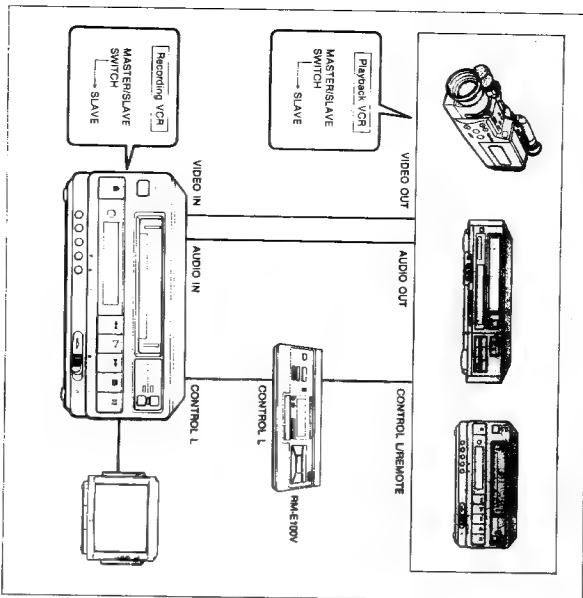**To edit the next scene**
Repeat steps 5 to 9.

When editing is completed
Press the STOP button on both of the units.

Editing

Editing with the Video Editing Controller

Example — Controlling the EV-C3 with the Sony RM-E100V Video Editing Controller

By connecting EV-C3 and another VCR to the Sony video editing controller such as the RM-E100V, both of the VCRs can be remotely controlled for easier editing procedures. For your reference, a connecting example is given below. Please refer to the manual of the RM-E100V for detailed operation.

Playback VCR
MASTER/SLAVE SWITCH — SLAVE

Recording VCR
MASTER/SLAVE SWITCH — SLAVE

VIDEO OUT | AUDIO OUT | CONTROL L/REMOTE
VIDEO IN | AUDIO IN | CONTROL L
CONTROL L
RM-E100V

Antenna Connection

In order to view the playback picture on the TV screen, the EV-C3 and the TV receiver must be connected properly. The connection between the two units varies depending upon the type of TV receiver and the antenna that you have.
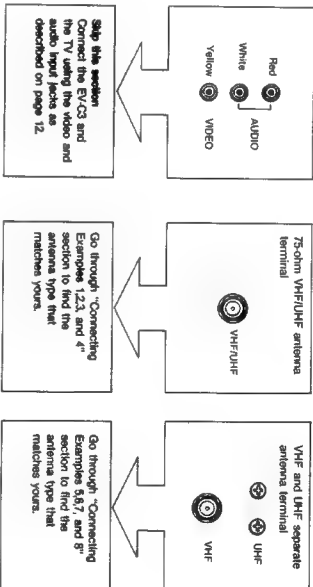
If your TV receiver does not have video and audio inputs, connection between the EV-C3 and the TV becomes very important. Before operating the unit, go through this section to make the correct connections.

First Check Your TV

If your TV has video and audio input jacks
Check the antenna terminals on your TV.

Red, White, Yellow — AUDIO, VIDEO

Skip this section. Connect the EV-C3 and the TV using the video and audio input jacks as described on page 12.

75-ohm VHF/UHF antenna terminal — VHF/UHF — Go through "Connecting Examples 1,2,3, and 4" section to find the antenna type that matches yours.

If your TV does not have video and audio input jacks
Check the antenna terminals on your TV.

VHF and UHF separate antenna terminal — VHF, UHF — Go through "Connecting Examples 5,6,7, and 8" section to find the antenna type that matches yours.

Before you begin...
- Turn off the power to the recorder and the TV.
- Disconnect the AC power cord of the recorder and the TV from the wall outlet.
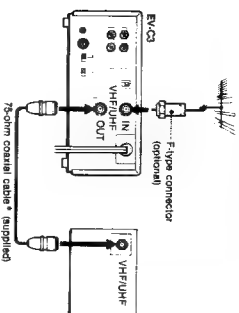- Do not connect the AC power cords until all of the connections are completed.

If your TV does not match the three examples given above
Consult your nearest Sony dealer or a qualified technician.

Caution
Connections between the recorder and the antenna terminals of a TV receiver should be made only as shown in the instructions.
Failure to do so may result in operation that violates the regulation of the Federal Communications Commission regarding the use and operation of rf devices.
Never connect the output of the recorder to an antenna or make simultaneous (parallel) antenna and recorder connections at the antenna terminals of your receiver.
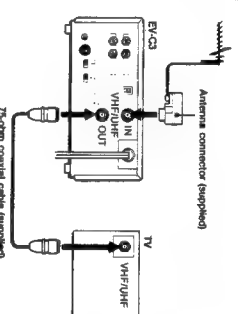
Connecting Examples

1 To connect a combination VHF/UHF antenna

EV-C3

75-ohm coaxial cable (supplied)
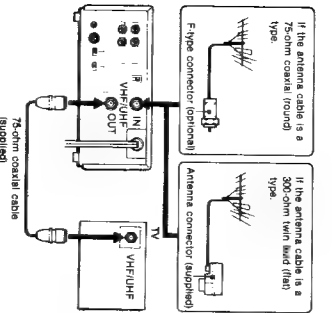
F-type connector (optional)

VHF/UHF

1. Most combination antennas are equipped with a U/V band separator (signal splitter). Remove this separator from the antenna cable.

2. Attach an F-type connector to the cable. (See "Attaching an F-type connector" on page 39.)

3. Insert the F-type connector to the VHF/UHF IN on the recorder.

4. Connect the VHF/UHF OUT on the recorder to the VHF/UHF antenna terminal on the TV using the supplied 75-ohm coaxial cable.
   • Use an optional RFC-8 extension cable, 8 m (25 ft) long, if the supplied 75-ohm coaxial cable is not long enough.
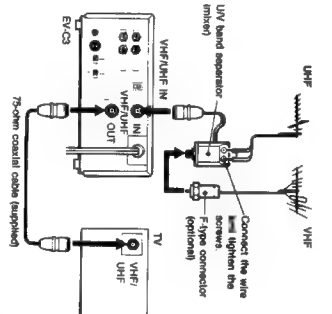
2 To connect the VHF antenna only

If the antenna cable is a 75-ohm coaxial (round) type.

F-type connector (optional)

If the antenna cable is a 300-ohm twin lead (flat) type.

Antenna connector (supplied)

75-ohm coaxial cable (supplied)

VHF/UHF

1. Connect the VHF antenna to the VHF/UHF IN on the recorder.
   • If the cable is a 75-ohm coaxial (round) type.
     — Attach the optional F-type connector to the cable. (See "Attaching an F-type Connector" on page 39.)
     — Insert the F-type connector to VHF/UHF IN on the recorder.
   • If the cable is a 300-ohm twin lead (flat) type.
     — Attach the supplied antenna connector to the cable. (See "Attaching an External Antenna Connector on page 39.)
     — Attach the antenna connector to the VHF/UHF IN on the recorder.

2. Connect the VHF/UHF OUT on the recorder and the VHF/UHF antenna terminal on the TV using the supplied 75-ohm coaxial cable.
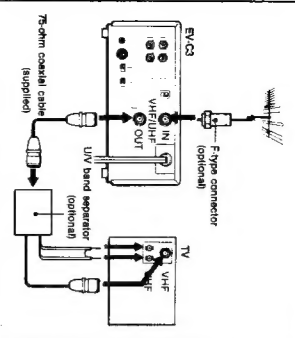
3 To connect the UHF antenna only

EV-C3

Antenna connector (supplied)

75-ohm coaxial cable (supplied)

TV
VHF/UHF

1. Attach the supplied antenna connector to the cable. (See "Attaching an External Antenna Connector page 39.)

2. Attach the antenna connector to the VHF/UHF IN on the recorder.

3. Connect the VHF/UHF OUT on the recorder and the VHF/UHF antenna terminal on the TV using the supplied 75-ohm coaxial cable.

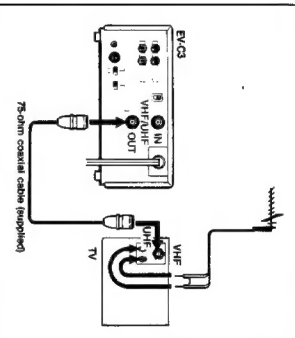## 4 To connect both the VHF and UHF antennas
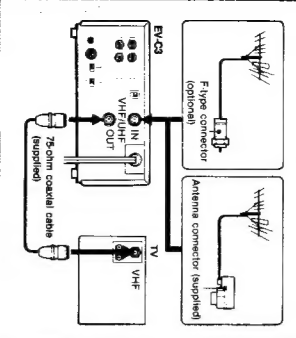
U/V band separator (mixer)

UHF

VHF

Connect the wire and tighten the screws

F-type connector (optional)

EV-C3

75-ohm coaxial cable (supplied)

TV
VHF/UHF

1. Attach an optional U/V band separator to the VHF/UHF IN connector on the recorder.

2. Connect the VHF and UHF antennas to the U/V band separator.

3. Connect the U/V band separator to the VHF/UHF IN connector on the recorder.

4. Connect the VHF/UHF OUT connector on the recorder and the VHF/UHF antenna terminal on the TV using the supplied 75-ohm coaxial cable.

Antenna Connection

5 To connect a combination VHF/UHF antenna

1. Most combination antennas are equipped with a U/V band separator (signal splitter). Remove this separator from the antenna cable.
2. Attach an F-type connector to the cable. (See "Attaching an F-type connector" on page 38.)
3. Insert the F-type connector to the VHF/UHF IN on the recorder.
4. Connect the 300-ohm twin lead (flat) type cable and the 75-ohm coaxial (round) cable of the U/V band separator removed from the antenna in Step 1 to the VHF and UHF antenna terminal on the TV.
5. Connect the U/V band separator and the VHF/UHF OUT on the recorder using the supplied 75-ohm coaxial cable.
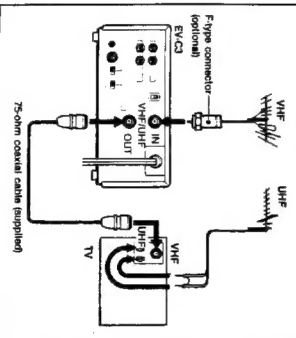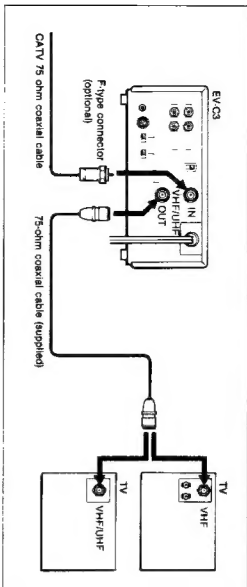
6 To connect the VHF antenna only

1. Connect the VHF antenna to the VHF/UHF IN on the recorder.
   • If the cable is a 75-ohm coaxial (round) type.
     —Attach the optional F-type connector to the cable. (See "Attaching an F-type Connector" on page 38.)
     —Insert the F-type connector to the VHF/UHF IN on the recorder.
   • If the cable is a 300-ohm twin lead (flat) type.
     —Attach the supplied antenna connector to the cable. (See "Attaching an External Antenna Connector" on page 39.)
     —Attach the antenna connector to the VHF/UHF IN on the recorder.
2. Connect the VHF/UHF OUT on the recorder and the VHF antenna terminal on the TV using the supplied 75-ohm coaxial cable.

7 To connect the UHF antenna only

1. Connect the 300-ohm twin lead (flat) UHF antenna cable to the UHF antenna terminal on the TV.
2. Connect the VHF/UHF OUT on the recorder to the VHF IN terminal on the TV receiver.

8 To connect both the VHF and UHF antennas

1. Attach the 300-ohm twin lead (flat) UHF antenna cable to the UHF antenna terminal on the TV recorder.
2. Attach an optional F-type connector to the VHF antenna cable.
3. Insert the F-type connector into the VHF/UHF IN on the recorder.
4. Connect the VHF/UHF OUT in the recorder and the VHF antenna terminal on the TV using the supplied 75-ohm coaxial cable.
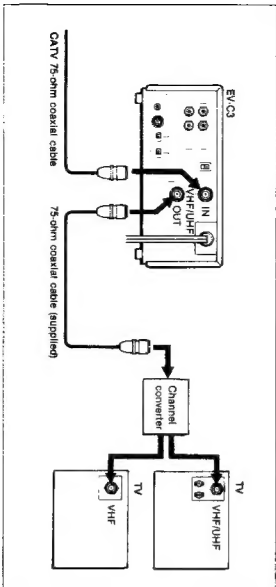
Antenna Connection

Connecting Examples

When the TV is a cable TV compatible type

An connecting example is given below, but we recommend you to consult your cable company to make sure that the cable is properly connected.

EV-C3

F-type connector (optional)

CATV 75 ohm coaxial cable

75-ohm coaxial cable (supplied)

VHF/UHF

TV

VHF

TV

When the TV is not a cable TV compatible type

Connect the cable TV channel converter between the recorder. By setting the TV/VTR switch to TV, you can watch a cable TV program while playing back or recording video sources using the VIDEO LINE IN jack on the EV-C3.

EV-C3

CATV 75-ohm coaxial cable

75-ohm coaxial cable (supplied)
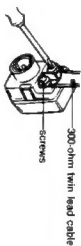
Channel converter

VHF

TV

VHF/UHF

TV

Attaching an external antenna connector

1 Loosen the screws on the antenna connector.

2 Fit the 300-ohm twin lead cable on the UHF antenna under the screws on antenna connector.

3 Tighten the screws again.

screws

300-ohm twin lead cable

Attaching an F-type connector

1 Strip 1/4 inch from the end of the cable so 3/8 inch of the center conductor is exposed.
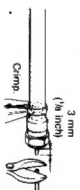
7 mm (1/4 inch)   10 mm (3/8 inch)

2 Slip the crimping ring over the cable.

3 Insert the inner conductor into the F-type connector shaft and push the end of the cable into the connector as far as it will go.

F-type connector

Fold back.

4 Slide the crimping ring over this assembly. Then pinch the crimping ring with pliers to hold the connection in place.
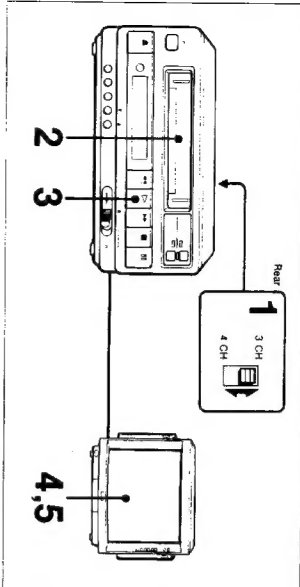
3 mm (1/8 inch)

Crimp.

5 Insert the F-type connector into the VHF/UHF IN on the recorder.

VHF/UHF IN

Setting the RF Unit

To get the proper RF signal, set the RF UNIT selector switch on the rear panel of the EV-C3. If channel 4 is active in your area, set the switch to channel 3, and vice versa.

1 Set the RF UNIT located at the rear to 3 CH or 4 CH, whichever is not active in your area.

2 Insert a recorded cassette.

3 Press ► PLAY.

4 Turn on the TV.

5 Set the TV receiver to either VHF channel 3 or 4 to agree with the RF UNIT setting you made in step 1. The picture recorded on the tape will appear on the TV screen. If no picture appears on the screen, or if the display is not clear, fine-tune the channel on the TV.

*For details about the TV channel adjustment, see the instruction of the TV receiver.

Rear

3 CH
4 CH

Specifications

System

Video recording system
Rotary two-head helical scanning
FM color under system

Video signal
NTSC color, EIA Standards

Audio signal
FM system

Audio recording system
Rotary head, FM system

Usable cassettes 8 mm format video cassettes

Tape speed
SP mode: Approx. 14.3 mm/sec.
LP mode: Approx. 7.2 mm/sec.

Recording/playback time
SP mode: 2 hours with the Sony P6-120MP video cassette
LP mode: 4 hours with the Sony P6-120MP video cassette

Fast forward/rewind time
Approx. 4 min with the Sony P6-30MP video cassette

Inputs and Outputs

Video input
VIDEO IN: phono jack
1Vp-p, 75 ohms
unbalanced, sync negative

Video output
VIDEO OUT: phono jack
1Vp-p, 75 ohms
unbalanced, sync negative

Audio input
AUDIO IN: phono jack
–7.5 dBs (0 dBs = 0.775 Vrms)

Audio output
AUDIO OUT: phono jack
–7.5 dBs

VHF/UHF input
F-type connector, 75 ohms, unbalanced

VHF/UHF output
F-type connector, 75 ohms, unbalanced, VHF channel 3 or 4 selectable

Control S IN

Control L (Master/slave)
Mini type
5 pin DIN

General

Power requirements
AC 120 V ±10%, 60 Hz

Power consumption
16 W

Operating temperature
5°C to 40°C (41°F to 100°F)

Storage temperature
–20°C to +60°C (–4°F to +140°F)

Dimension
Approx. 178 × 88 × 256 mm (w/h/d)
(7⅛ × 3½ × 10⅛ inches)
including the projecting parts and controls

Weight
Approx. 2.4 kg (5 lb. 5 oz.)

Remote Commander RMT-450

Remote control system
Infrared control

Command mode VTR-2

Power requirements
3 V DC, using two size AA (R6) batteries

Dimensions
Approx. 40 × 18 × 175 mm (w/h/d)
(1⅝ × ¾ × 7 inches)
including projecting parts and controls

Weight
Approx. 105 g (3.7 oz.)
(without batteries)

Accessories Supplied

Remote Commander RMT-450 (1)
Size AA (R6) battery (2)
External antenna connector (1)
75-ohm coaxial cable with F-type connector, 2 m (1)

Design and specifications are subject to change without notice.

Troubleshooting

Symptom	Possible Causes
POWER cannot be turned on.	Power cord is not connected.
Cannot monitor playback picture or the screen.	The TV/VTR switch is set to TV.
Poor picture quality.	• The RF unit is not set to the proper channel.
	• The video heads are dirty. Clean the heads using the Sony V8-25CL video head cleaning cassette. For details on cleaning, refer to the instructions furnished with the cleaning cassette. If the V8-25CL cleaning cassette is not available in your area, have the heads cleaned at the nearest Sony service facility.
Playback cannot be performed even when the ▶ PLAY button is pressed.	The tape is at its end.
No recording can be performed.	The tab on the cassette is slid out with the red portion showing.
Search using the TAPE RETURN button cannot be performed.	The TAPE RETURN button was pressed before the tape counter display was more than one minute.
Cannot control by the Remote Commander.	The batteries are exhausted.